

I wish to state my indebtedness to Dr. Frederick Knab for the kind loan of the extensive collections of the National Museum. My thanks are due to Dr. J. Chester Bradley and Dr. James G. Needham for frequent advice on difficult questions.

OBSERVATIONS ON *MICOUTALIS CALVA* SAY.

BY IGNAZ MATAUSCH,

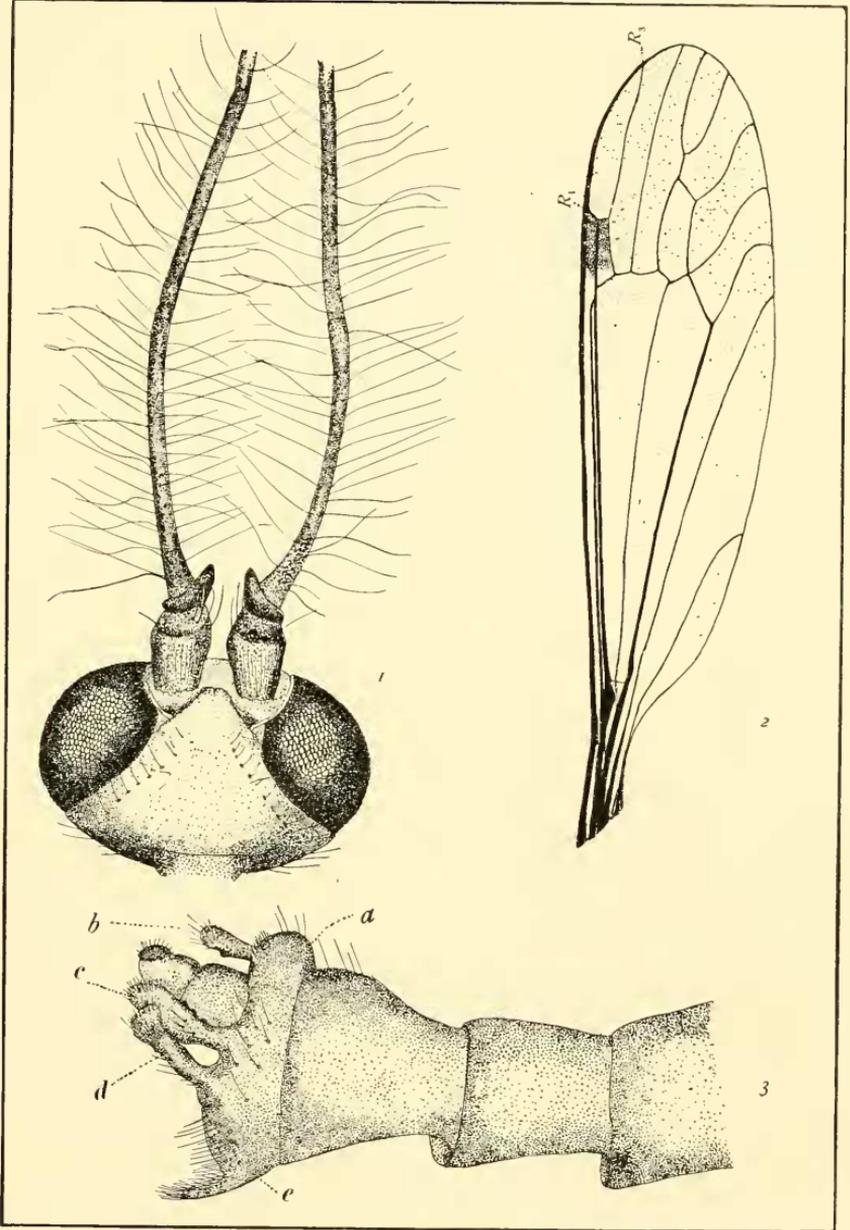
Roselle, N. J., 1911.

Two years ago, on September 26, I found the first insect of this species, a female, near Irvington, N. J. Last year I did not see a single one, but this season, on August 20, while examining an elder bush near Roselle, N. J., for a larger genus (*Acutalis*), I found two very small insects like it, but of a considerably smaller size, which proved to be *Micoutalis*; one of these I captured, but the other escaped.

While hunting around that bush, where numerous ironweed-plants (*Vernonia noveboracensis*) had been in full bloom, I found one very small nymph belonging, as I saw, to a small kind of *Membracidae*. Soon afterward I found more of these nymphs, and at the same time more of the adult insects of *Micoutalis*. I thought they probably were the nymphs of that species, and to make sure I collected a number which I succeeded in rearing, as all (with the exception of one which died) were in the last nymphal stage. They matured, and both sexes have been obtained; on August 22d, the first, a male; on 23d a female; on 24th another female; on 26th more males and females. On this last day the plant wilted, and on the 28th all died.

On September 3, when the plants in the field began to wither, I collected two more nymphs which matured, one on September 11 and the other the following day, both females. On September 4 I found one soft nymph, of a brilliant yellow-red color, just after the change from the preceding stage into the last nymphal stage; but its bright color did not last, and after about one hour turned to a yellowish-red brown.

They seem to be very delicate, for after being handled in that



ALEXANDER—MEGISTOMASTIX

condition the insect died the next day. Whether these insects have this bright color, after each molt, as does *Euchenopa binotata* (which are at first always of yellow and red), I cannot state, but they probably do.

On September 15 a frost set in and on the 17th only very scattered blossoms were found and the plants began to dry. At this time only one nymph was collected which matured on September 22 into a splendid female. After that time none were found until October 8, when only a few smaller plants were partly green; then I discovered one nymph of which I made a water-color picture

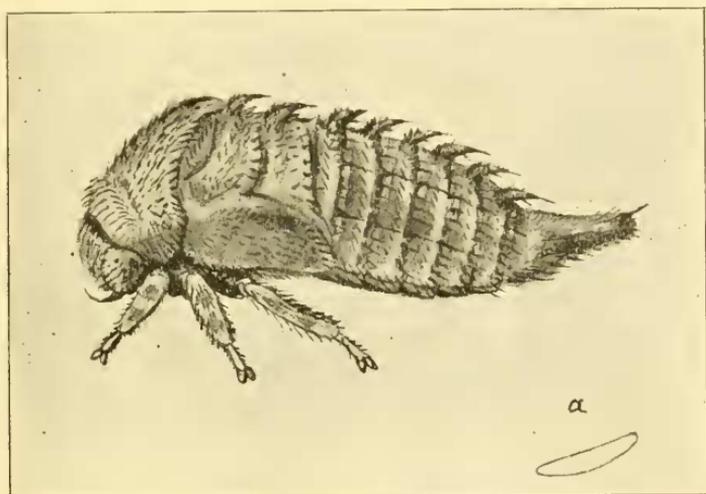


Fig. 1. Nymph and egg of *Micoutalis calva* Say.

on the 12th of October. By supplying a fresh plant I found it fully developed on October 14.

After that I could not find any food plant in nursing condition so I tried *Trifolium pratense* and *T. hybridum*. The insect was kept on those plants till December 3 when I found it dead, fastened to the stem with its sucking bristles. The figure shows the nymph in the stage before maturity; they are nearly equal to the adult in size and vary somewhat according to the sex; averaging 3.5 mm. in length. In color some are dull green, others yellowish-brown, or red-brown; but the majority are purple, the exact color of the stems toward the upper parts of the plants. Before trans-